



OKLAHOMA

water news

MONTHLY NEWSLETTER OF THE OKLAHOMA
WATER RESOURCES BOARD

Gerald E. Borelli, Chairman

Earl Walker • L.L. Males • John B. Jarboe • Ralph G. McPherson • Gary W. Smith • Ernest R. Tucker • Robert S. Kerr, Jr. • R.G. Johnson

Top Policymakers in Water to Speak at ICWP Convention

The Oklahoma Water Resources Board will host 100 or more top water administrators from across the nation when the Interstate Conference on Water Problems convenes at the Skirvin Plaza Hotel in Oklahoma City September 19-22.

Four days of information exchange and policy-setting meetings will feature as speakers and panelists some of the nation's top-flight water authorities, said James R. Barnett, OWRB executive director who also serves on the ICWP Board of Directors and has coordinated the annual meeting as program chairman.

Leading the lineup of speakers at the first general session on September 20 will be Commissioner Robert M. Broadbent of the Bureau of Reclamation. Broadbent, a 1981 Reagan appointment, is a native of Ely, Nevada, and will come as a spokesman on the Administration's water policy.

Sharing the morning podium with Commissioner Broadbent will be Maj. Gen. John F. Wall Jr., Civil Works Director of the U.S. Army Corps of Engineers. Wall, a West Point graduate, holds a BA, MS and PhD in Civil Engineering as well as a law degree.

Dr. Dallas Peck, Director of the U.S. Geological Survey since 1981, will also address the morning session. Peck has represented the United States in worldwide geological studies and has a BS and MS in geology from the California Institute of Technology and a PhD from Harvard University.

The luncheon address will be delivered by Gov. George Nigh. It was he who first tendered the invitation

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EPA Enviro-Pod Sky Cameras Cast a Watchful Eye on Water

Often a pollution problem is easier to spot from an altitude of 2500 feet than standing in the middle of it—the phenomenon of not being able to see the forest for the trees. Now the OWRB can bring the forest into focus in tracking pollution and following up faster on spills and fish kills.

It all came together recently for the OWRB with the loan of a 2-camera environmental monitoring system, the Enviro-Pod, from the Environmental Protection Agency and the hiring of a full-time photographer/pilot/journalist, Barry Fogerty.

The Enviro-Pod is designed specifically for pollution control monitoring from a pod mounted on the underside of a Cessna 172 Skyhawk, a 4-place light plane.

State agencies taking to the air is not new. The Department of Wildlife Conservation uses aircraft to manage and count the harvests of legal game animals and fish. The Department of Transportation contracts for aerial photography to map the alignment of proposed highway routes, drainage features and condemned structures in the path of construction. The Department of Agriculture inventories cropland and surveys limits of plant disease or damage to crops and farmland by natural disaster. In all, some dozen state agencies use their own or leased aircraft to increase the efficiency of their operations.

It is the Enviro-Pod and its potential in the war against pollution that are new to Oklahoma.

Fogerty, who secures the 200-pound pod to the rented plane with steel straps, pilots the plane and handles

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Maj. Gen. John F. Wall, Jr.



Dr. Dallas L. Peck

ICWP Convention, continued from page 1

to the 50-state organization to meet in Oklahoma in 1983.

"Water problems are not confined to Oklahoma. The nation as a whole is entering a crisis in terms of a usable water supply, so it's important that we convene to formulate proper responses," said Nigh.

Reflecting the group's interest in expressing to Congress and the Administration the needs and concerns of states over current water issues, the first afternoon panel will present a Congressional Report.

Concluding afternoon activities will be a panel directed toward water project financing which will outline approaches taken by several different states.

Tuesday evening, conferees, spouses, and guests will be taken by bus to the National Cowboy Hall of Fame and Western Heritage Center for a private tour of the galleries and a catered western dinner.

Wednesday morning activities include business meetings, a panel discussion with ground water as the subject, a welcome to the city and remarks by Mayor Andy Coats. A luncheon address by Dick Whittington, PE, Regional Administrator for Region VI of the U.S. Environmental Protection Agency will be followed by a tour of the Corps of Engineers Lake Arcadia Project, near Edmond.

A multi-state approach to water shortages and weather modification will be the two topics treated by panelists on Thursday, the closing session. The 1983 annual meeting of the Interstate Conference on Water Problems will be adjourned at midday.

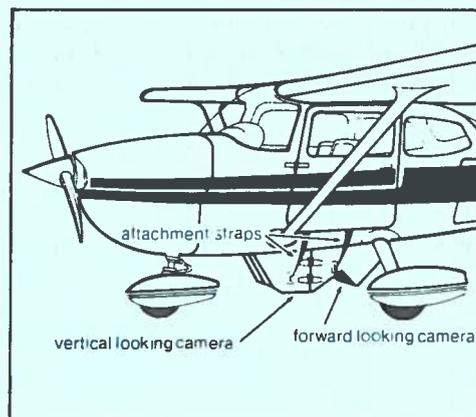
Months of planning for the annual meeting were coordinated by Board staff and Barnett through ICWP Executive Director Joan Kovalic and ICWP Chairman Henry Silberman. Headquarters for the organization is Washington, D.C.

Enviro-Pod, continued from page 1

camera controls, said that the forward camera looks straight down, while the rear camera looks forward and down at a 45-degree angle. The cameras themselves, he explains, can carry up to 500 feet of film, enough to cover 600 miles of country, photographing everything passing under its lens in swaths up to seven miles wide and a mile-and-a-quarter forward at 10,000 feet above the ground.

"Although an altitude of 2500 feet or less is practical for most of our surveillance and photography, at 10,000 feet, objects as small as two-and-a-half feet square can be seen," Fogerty said. "Photographs produced by the Enviro-Pod system measure approximately 2¼ x 7¾ inches."

The Enviro-Pod is an example of war surplus put to peacetime use. The camera systems originally were designed and used as intelligence gathering tools in Vietnam. The "pod" or outside shell, divided into two compartments and shaped to fit under the aircraft, is the brainchild of U.S. Air Force technologists who built it to specifications for the EPA.



The Enviro-Pod is attached to the underside of the light plane by steel straps from the pod to the framework of the aircraft.

"In addition to standard color or black and white, the Enviro-Pod can use special films such as infrared which can detect dead or dying foliage by its sensitivity to reflected heat," Fogerty pointed out.

Water quality specialists have utilized the Enviro-Pod in tracing the courses of several state streams, photographing the water for discoloration that is often a clue to pollution. Such pictures could also record the extent of irrigated agriculture, make note of feedlots and natural features which could account for sediment loads or other types of pollution.

Main Hutcheson, OWRB section head, estimated that a recent overflight of Pryor Creek to seek out potential pollution sources was completed in an hour-and-a-half.

"Had we relied on conventional monitoring methods, it would have required three weeks to gather the same amount of information," said Hutcheson.

In the first few months of operation, the OWRB has shared its services with other state agencies including the Oklahoma Corporation Commission and Department of Mines, sharing costs as well, and thereby lowering the information gathering costs to all.

Coordination and scheduling the use of the Enviro-Pod is the job of the Department of Pollution Control, which coordinated training in the state in the use of the system and its installation.

'Good Old Days' Could Return With Northeast Lake Cleanup

One of the most ambitious recycling jobs ever attempted in the state is in process in Oklahoma City. Aluminum cans and newspapers take well to recycling—but a lake?

Yet this is exactly what is happening in Oklahoma City at Northeast Lake, or Zoo Lake, in Lincoln Park.

"The lake used to be spring-fed and crystal clear," according to OWRB employee Georgia Patton, a native of the City who remembers swimming in it in the 1930's.

The lake was closed to swimming in the thirties, but boating and fishing were permitted until 1981, when structural weaknesses in the dam were noted.

Jim Grimshaw, OWRB environmental specialist supervisor, says, "Human and animal refuse followed the slope of the land into the lake, in addition to nutrients from the golf course and the park complex." "Northeast Lake is a good example of what can happen to beautiful natural areas when they are taken for granted."

According to David Harkness of the Oklahoma Department of Pollution Control, Northeast Lake is one of nine lakes granted study and cleanup funds by the EPA in 1980 as part of the federal Clean Lakes Program. It was the intent of the program to restore the recreational benefits of publicly owned lakes near the nation's population centers.

The seven Oklahoma lakes being studied by the OWRB were selected from the 72 studied and classified according to their need for renovation. The other sites for Clean Lakes projects were Lake Carl Blackwell, west of Stillwater; Lake Atoka in the southeast; Overholser in Oklahoma City; Lake Frances, near the Oklahoma-Arkansas state line; Lake Lawtonka, near Lawton; and Ada City Lake in southeastern Oklahoma.

The OWRB, working with the Department of Pollution Control and the EPA, pooled their talents and resources to define the pollution problems of the lakes. After these diagnostic studies and plans for restoration are completed, the OWRB is responsible for seeking a sponsor to share cleanup costs with the EPA.

Northeast Lake has been evaluated and plans for its proposed cleanup submitted to the EPA. Approval is expected this month.

The major changes proposed for the lake consist of diverting the runoff from the zoo, and incoming stream flow into a collection channel which will carry it to a lagoon for proper disposal, according to Grimshaw. When the lake is refilled, its clean waters will be stocked with fish provided by the Department of Wildlife Conservation. He pointed out that the lake has gotten shallower over the years due to deposits of animal wastes and topsoil from the park and golf course, so it will be deepened two feet by dredging. The nutrient-rich material dredged



This photo supplied by historian Pen Woods, director of projects and promotions at Enterprise Square, shows bathers posed on the beach that hosted swimmers, fishermen, boaters and picnickers at Northeast (Zoo) Lake in its heyday.

**ACTIVE CONSERVATION STORAGE IN SELECTED
OKLAHOMA LAKES AND RESERVOIRS
AS OF JULY 25, 1983**

PLANNING REGION LAKE/RESERVOIR	CONSERVATION STORAGE (AF)	PERCENT OF CAPACITY
SOUTHEAST		
Atoka	119,987	97.2
Broken Bow	907,498	98.8
Pine Creek	77,700	100.0
Hugo	157,600	100.0
CENTRAL		
Thunderbird	105,925	100.0
Hefner	75,355	100.0
Overholser	15,935	100.0
Draper	68,832	68.8
SOUTH CENTRAL		
Arbuckle	62,502	99.9
Texoma	2,602,920	98.7
Waurika	202,396	99.7
SOUTHWEST		
Altus	88,561	66.6
Fort Cobb	78,423	100.0
Foss	157,831	64.7 ²
Tom Steed	83,041	93.3
EAST CENTRAL		
Eufaula	2,205,379	94.7
Tenkiller	614,400	97.9
Wister	27,100	100.0
Sardis	291,054	96.2 ¹
NORTHEAST		
Eucha	76,700	96.4
Grand	1,387,160	93.0
Oologah	542,515	99.7
Hulah	30,180	98.6
Fort Gibson	362,769	99.3
Heyburn	6,226	94.3
Birch	18,703	97.4
Hudson	199,444	99.6
Spavinaw	30,000	100.0
Copan	36,845	84.9—
NORTH CENTRAL		
Kaw	416,844	97.3
Keystone	616,000	100.0
NORTHWEST		
Canton	97,500	100.0
Optima	1,588	— ¹
Fort Supply	13,900	100.0
Great Salt Plains	31,400	100.0
STATE TOTALS	11,808,625³	96.0¹

1. In initial filling stage
2. Temporarily lowered for maintenance
3. Conservation storage for Lake Optima not included in state total

Data courtesy of U.S. Army Corps of Engineers, Bureau of Reclamation, Oklahoma City Water Resources Department, and City of Tulsa Water Superintendent's Office.

from the lake will be sold to commercial fertilizer manufacturers and the proceeds donated to the zoo complex.

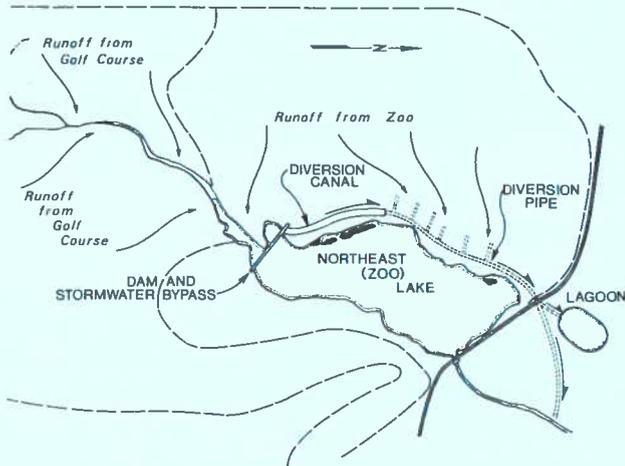
Completion of the Northeast Lake restoration will take about two years and require approximately \$300,000. Money for the cleanup will come from two sources — The

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Northeast Lake, continued from page 3

Oklahoma Zoological Trust and the EPA sharing the costs equally, if the project is approved.

Grimshaw projects that the lake again can be one of the main attractions at Lincoln Park, and he looks forward to the return of paddleboats, the scaled-down riverboat, the crowds of picnickers, and fishermen.



Zoo runoff which formerly washed directly into the lake, now will be collected along the diversion pipe and carried into a treatment lagoon.



Governor Gives Funding Program Go-Ahead

Gov. George Nigh announced July 25 that \$25 million in the state water development fund would be released

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MARY E. WHITLOW, Editor

BARRY FOGERTY, Writer

MIKE McGAUGH, Layout

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Oklahoma Water Resources Board
1000 N.E. 10th P.O. Box 53585
Oklahoma City, Okla. 73152

to the OWRB to administer the Board's financial assistance program. Although the appropriation was made in July, 1982, uncertainty surrounding the state budget had delayed its use. The water development fund is intended to help Oklahoma cities, towns and rural water or sewer districts finance construction or improvements to water and sewer facilities.

Nigh also said the OWRB would implement the grant portion of the funding program, which could make grants up to \$100,000 to public entities facing emergencies in their sewer or water systems.

JULY CROP AND WEATHER SUMMARY

By late July, more than half of the state suffered from moisture stress, with central and northern sections demonstrating the most severe problems.

The wheat harvest is complete and farmers continue to plow wheat ground. Sorghum, soybeans, peanuts and corn remained in good condition and cotton was rated fair-to-good. Sorghum crops are beginning to show signs of moisture stress. Alfalfa hay remained in good condition, although hot, dry weather continues to stress prairie hay and forage sorghum hay.

Pastures and livestock were in good condition, but pastures need moisture for normal growth.

Temperatures were above normal throughout the state during the closing week of July with only some eastern counties registering significant rainfall.

Oklahoma Crop and Livestock Reporting Service

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